

FIG. 1

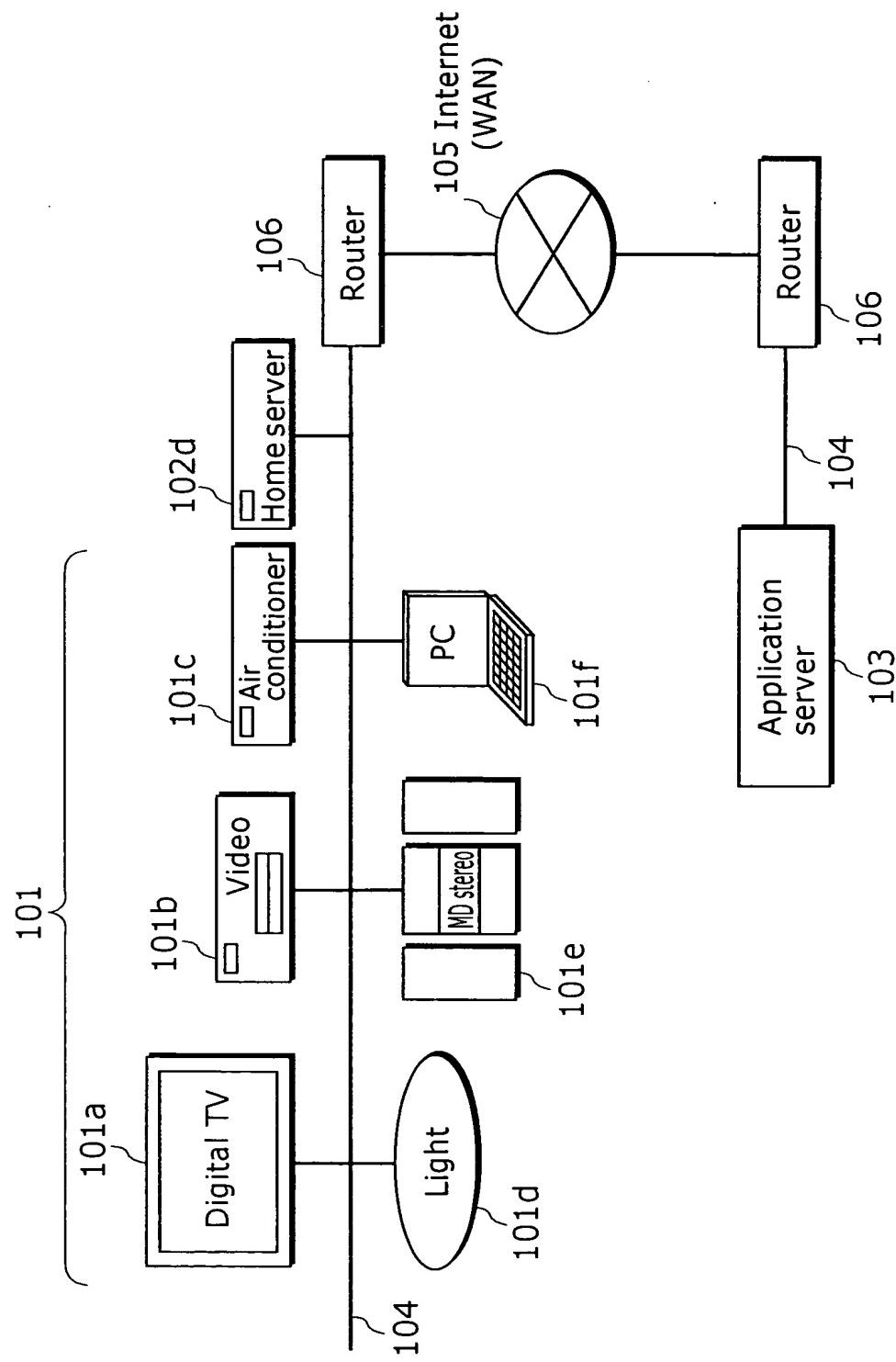


FIG. 2

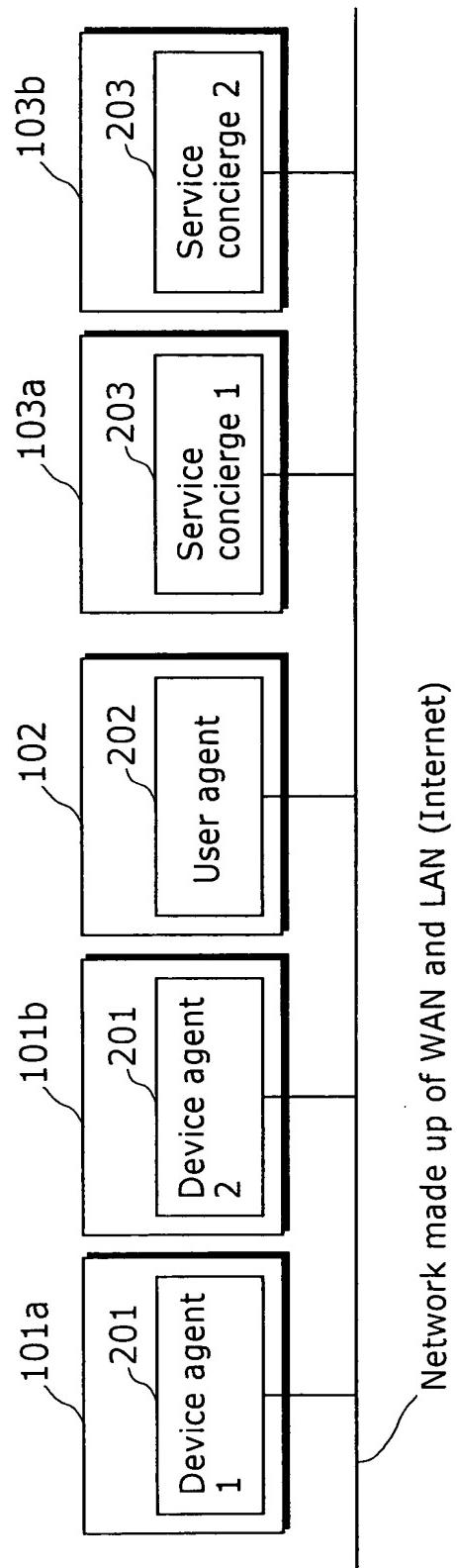
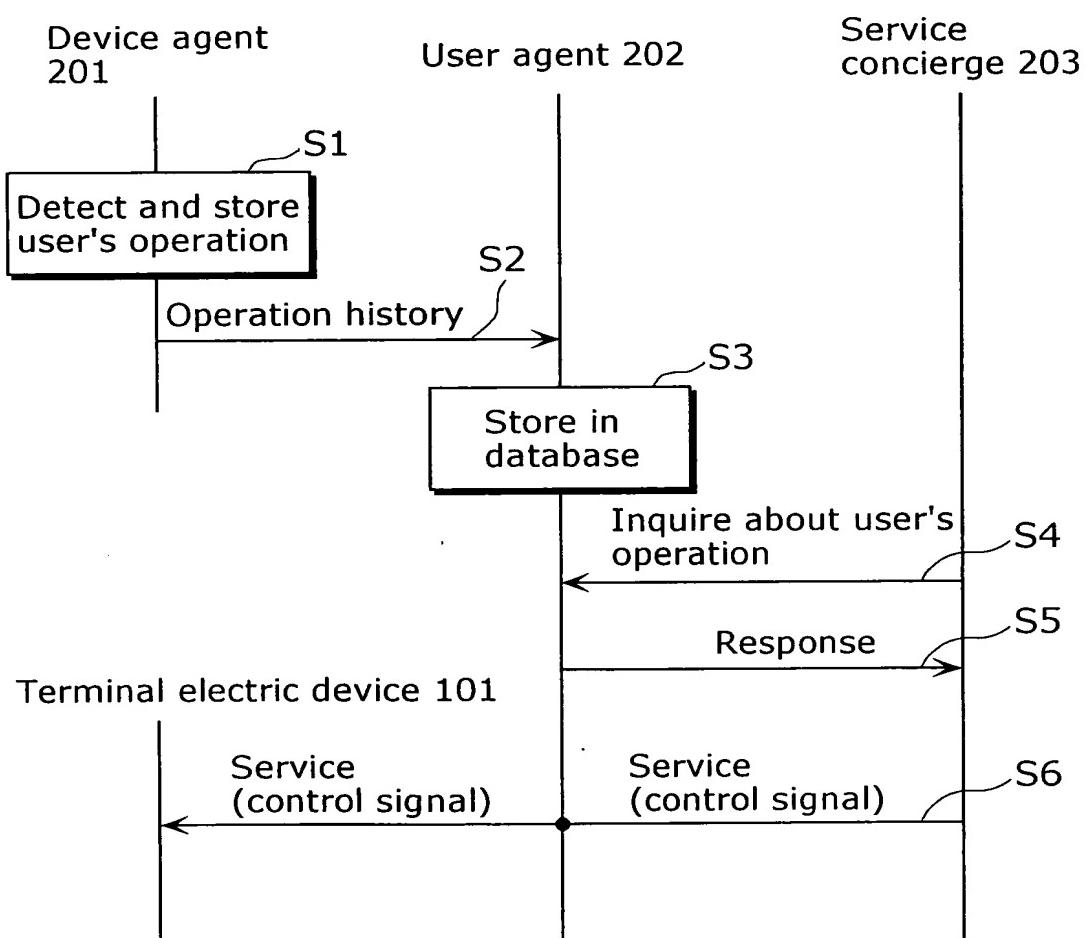


FIG. 3



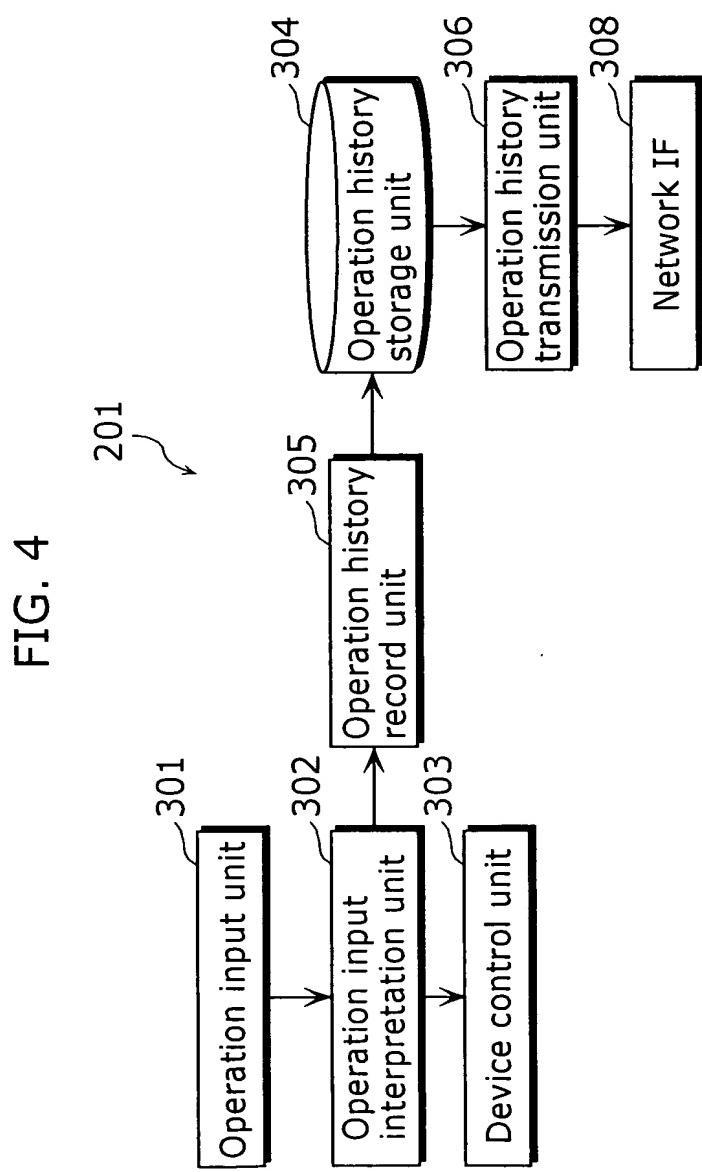


FIG. 5

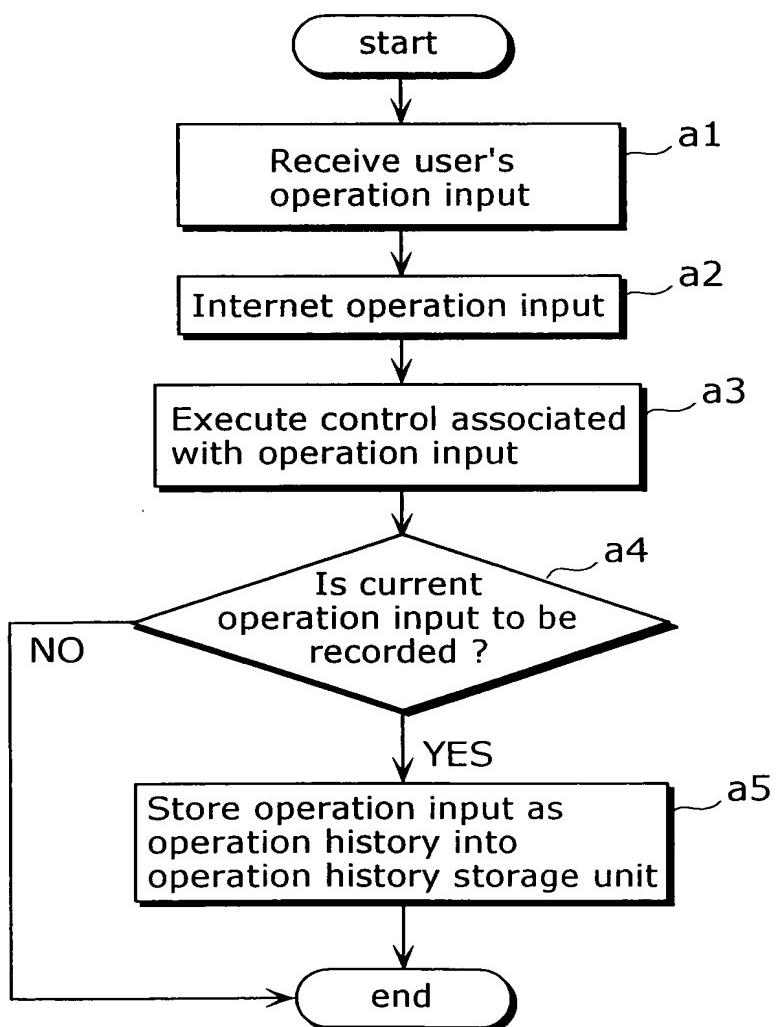


FIG. 6

Device type	Operation type	Operation type specific identifier
TV	Power On	PowerOn
	Power Off	PowerOn
	Volume Up	VolUp
	Volume Down	VolDown
	Change channels	Play
	...	...
VIDEO	Power On	PowerOn
	Power Off	PowerOff
	Play	Play
	Stop	Stop
	Record	Record
	Reserve	Reserve
	...	...
Air Conditioner	Power On	PowerOn
	Power Off	PowerOff
	Temperature setting	Set
	Air volume setting	Set
	Stop	Stop
	Reserve	Reserve
	...	...
	...	...

FIG. 7

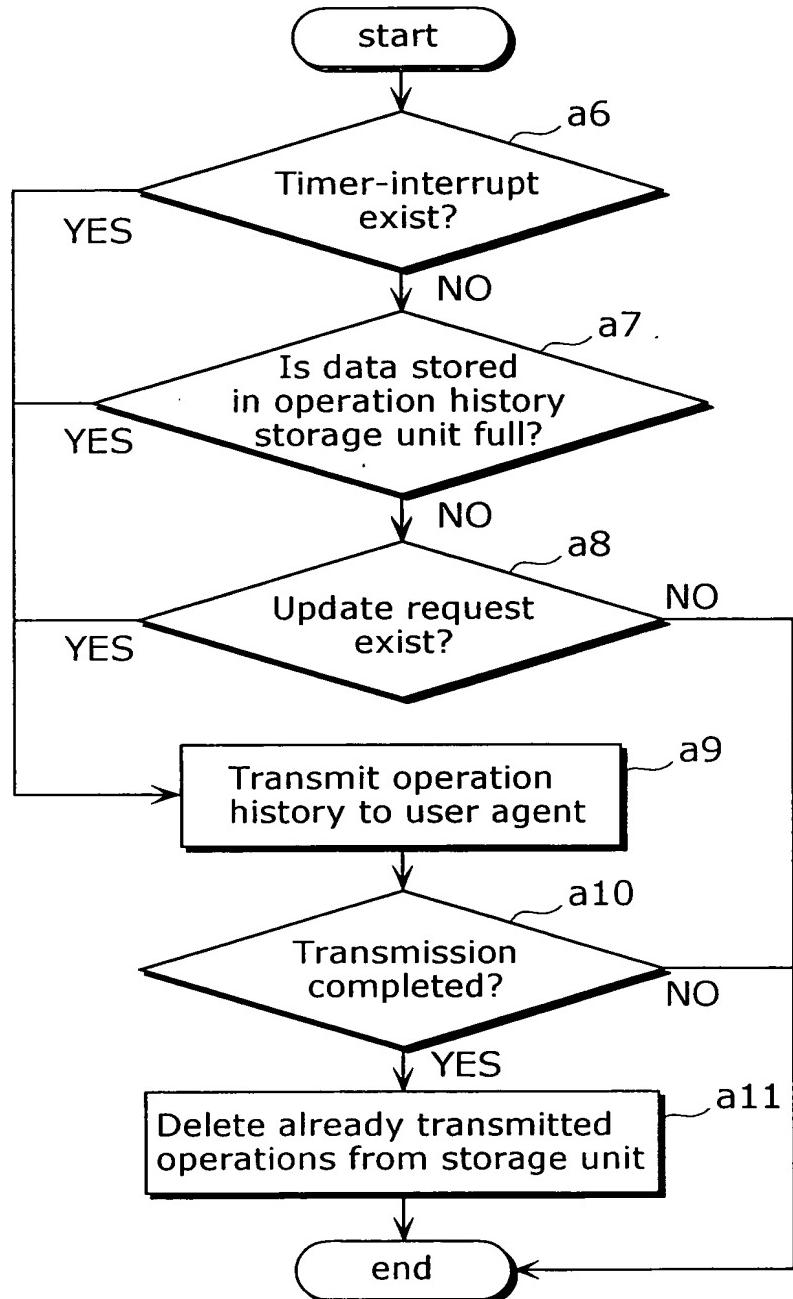
(Example 1)

Operation date and time	Device type	Operation type specific identifier	Argument
2002/08/29 11:00	Air Conditioner	Set	27

(Example 2)

Operation date and time	Device type	Operation type specific identifier	Argument
2002/08/30 18:00	TV	Play	ID:XXXXXX

FIG. 8



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FIG. 9

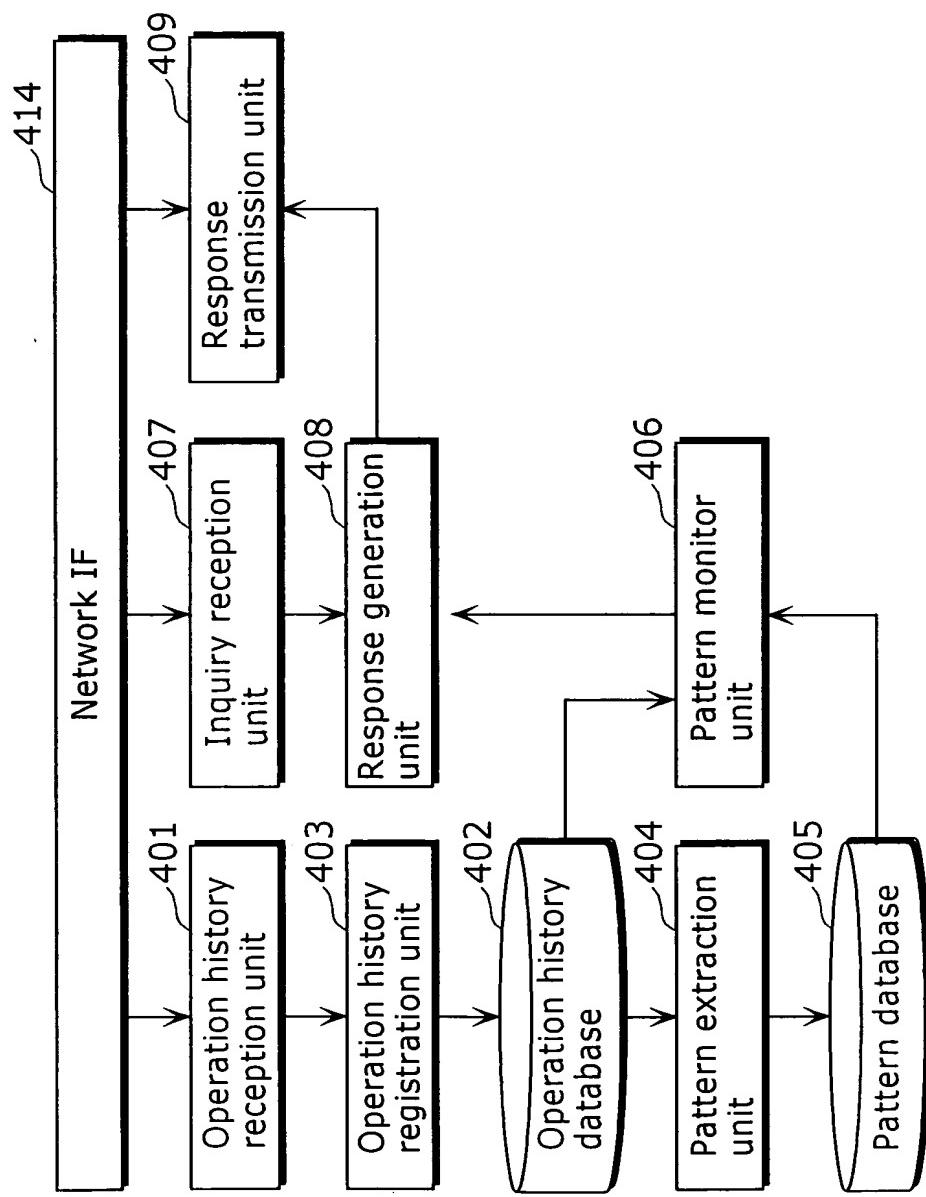


FIG. 10

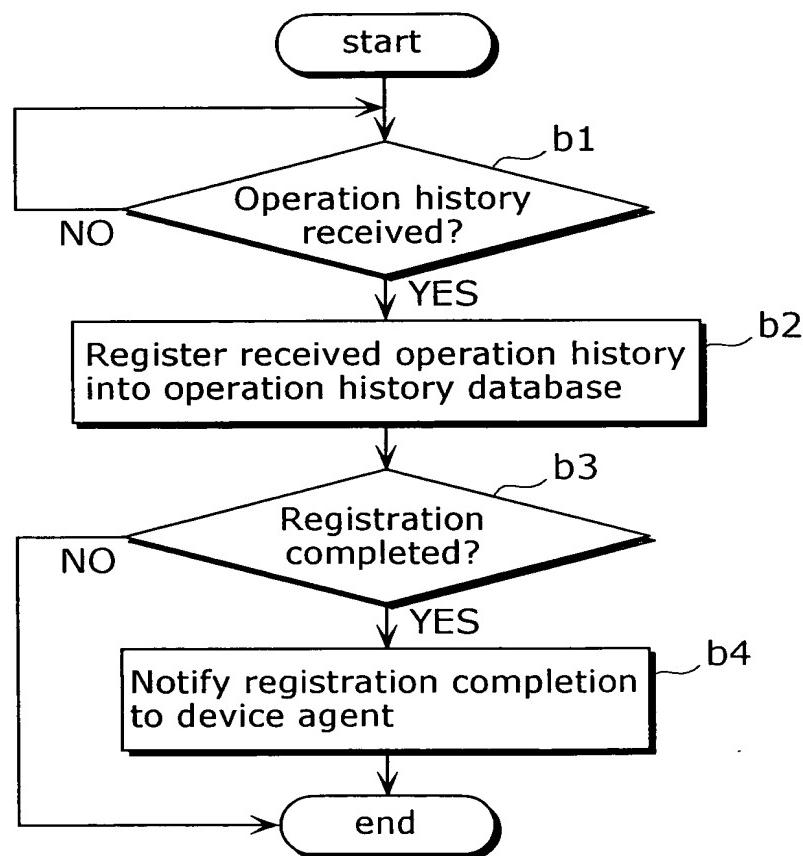


FIG. 11

Operation date and time	Device type	Operation type specific identifier	Argument
2002/08/30 21:00	TV	PowerOn	
2002/08/30 21:00	TV	Play	xxxxxxxxx04
2002/08/30 21:01	AirConditioner	PowerOn	
2002/08/30 21:46	Video	Reserve	xxxxxxxxx09
2002/08/30 22:55	TV	PowerOff	
2002/08/30 22:57	AirConditioner	PowerOff	
2002/08/30 22:58	MD	Play	xxxxxxxxxxabc
:	:	:	:
2002/08/31 20:56	TV	PowerOn	
2002/08/31 21:00	TV	Play	xxxxxxxxx04
2002/08/31 21:00	AirConditioner	PowerOn	
2002/08/31 21:55	TV	PowerOff	
2002/08/31 21:56	MD	Play	xxxxxxxxxxabc
:	:	:	:

FIG. 12

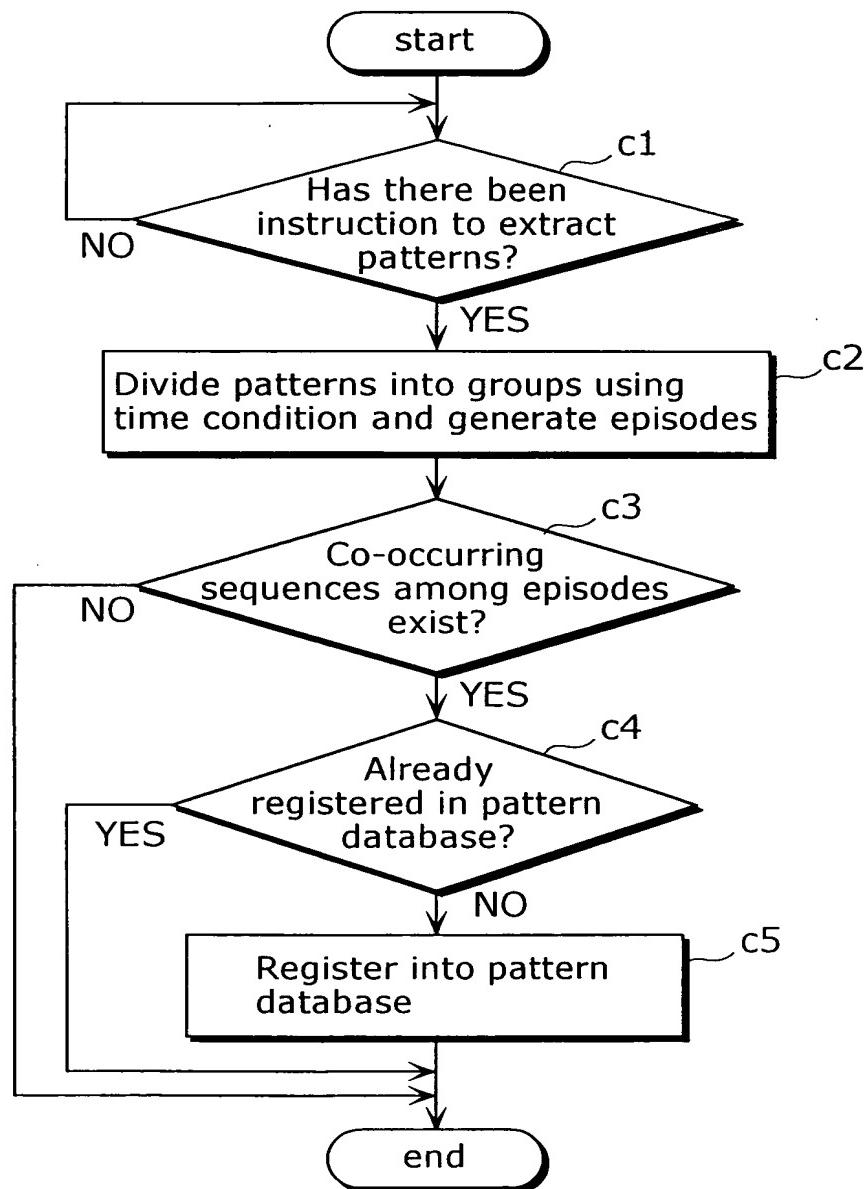


FIG. 13

Episode	Operation sequence
1001	TV-PowerOn, TV-Play, AirConditioner-PowerOn
1002	Video-Reserve
1003	TV-PowerOff, AirConditioner-PowerOff, MD-Play
1004	TV-PowerOn, TV-Play, AirConditioner-PowerOn
1005	TV-PowerOff, MD-Play

FIG. 14

No.	Frequent operation pattern
1	TV-PowerOn, TV-Play, AirConditioner-PowerOn
2	TV-PowerOff, MD-Play

FIG. 15

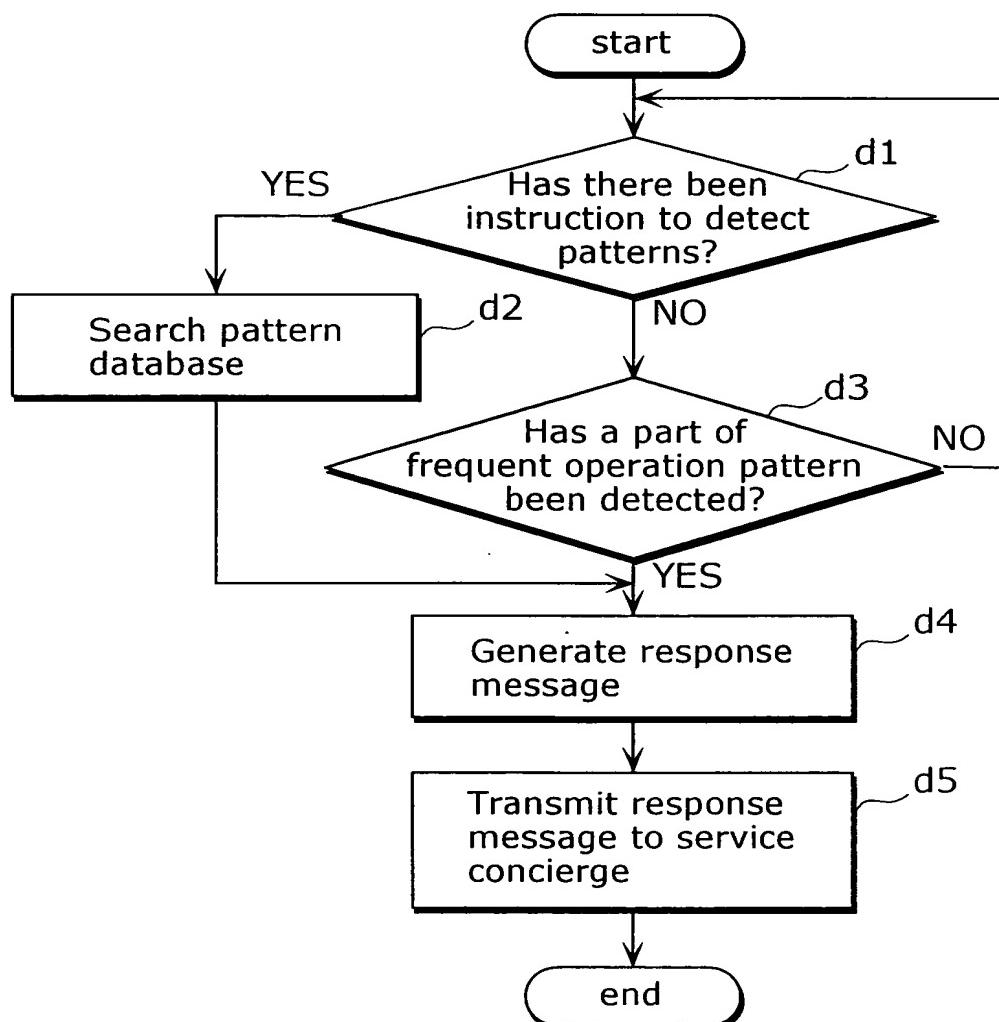
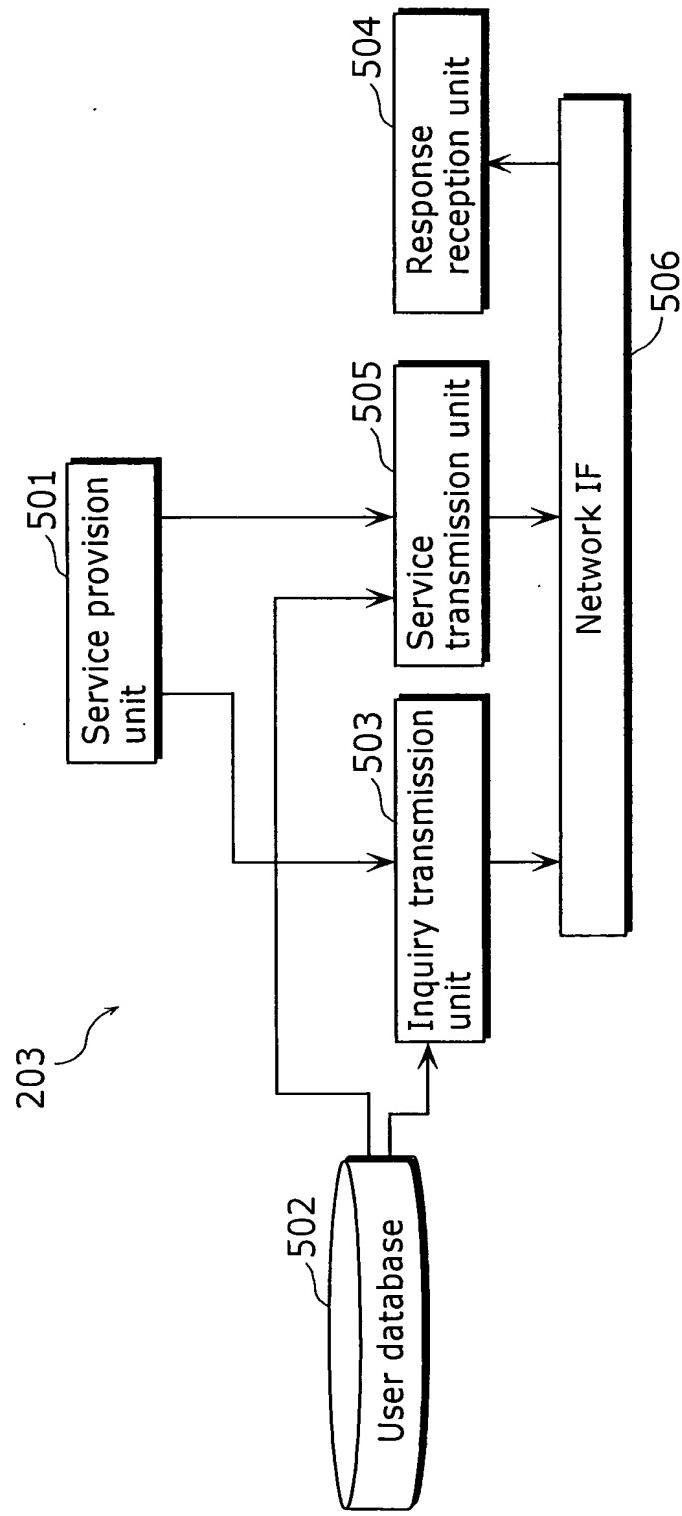


FIG. 16



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FIG. 17

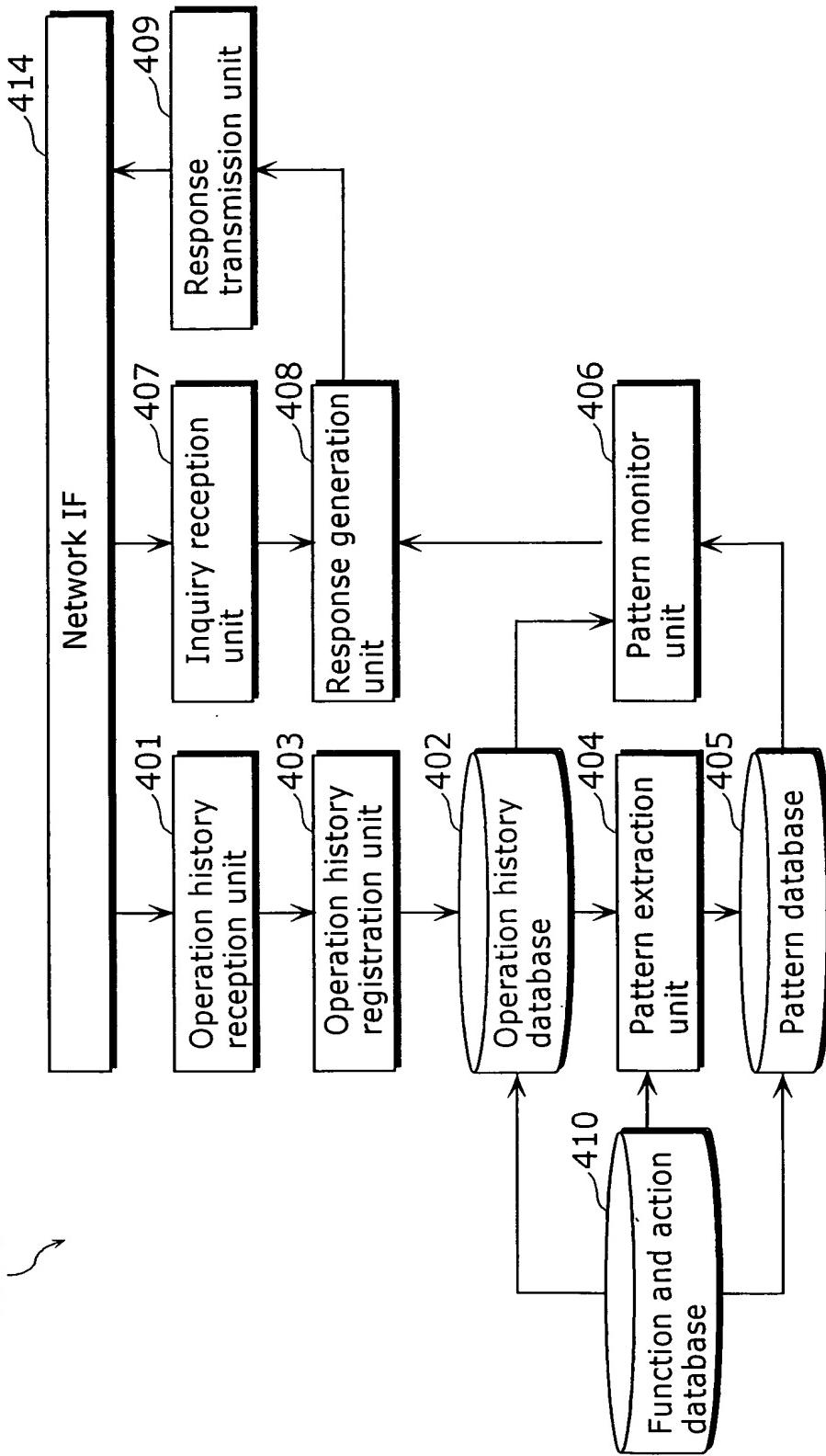


FIG. 18

Device type	Operation type	Operation type specific identifier	Function identifier
TV	PowerOn	PowerOn	Watch
	PowerOff	PowerOff	Stop-Watch
	Change channels	Play	Watch
	...	...	...
VIDEO	Play	Play	Watch
	Stop	Stop	Stop-Watch
	...	...	...
Air Conditioner	PowerOn	PowerOn (25°C or higher)	Cool
	PowerOff	PowerOff (25°C or higher)	Stop-Cool
	Temperature setting	Set(25°C or higher)	Cool
	...	...	...
Fan	PowerOn	PowerOn	Cool
	PowerOff	PowerOff	Stop-Cool
	...	...	...
Radio	PowerOn	PowerOn	Listen
	PowerOff	PowerOff	Stop-Listen
	Select channel	Play	Listen
	...	...	...
MD	Play	Play	Listen
	...	...	...
...	...	...	...

FIG. 19

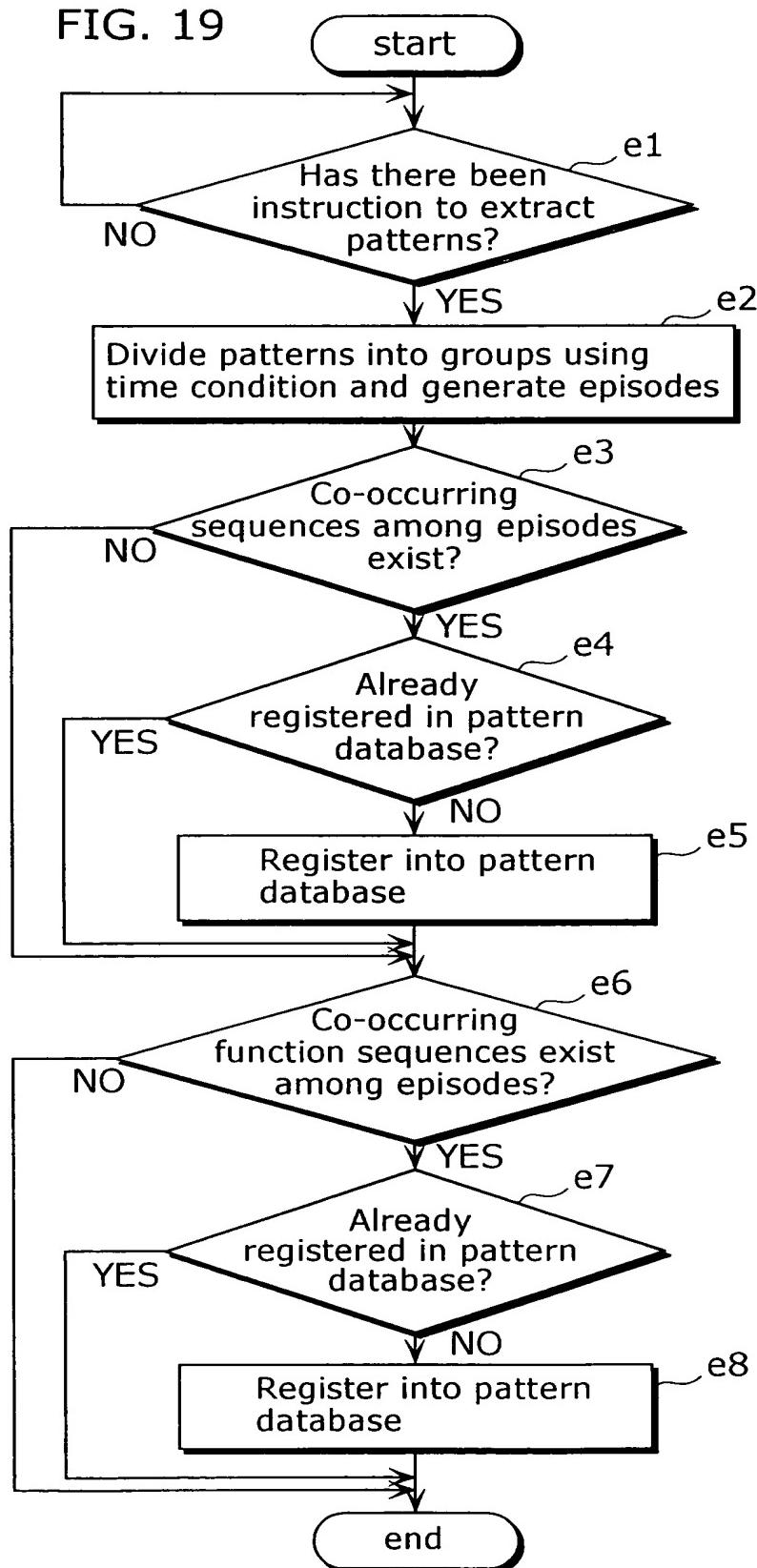


FIG. 20

Operation date and time	Device type	Operation type specific identifier	Argument
2002/08/30 21:00	TV	PowerOn	xxxxxxxxxx04
2002/08/30 21:00	TV	Play	xxxxxxxxxx04
2002/08/30 21:01	AirConditioner	PowerOn	
2002/08/30 22:55	TV	PowerOff	
2002/08/30 22:57	AirConditioner	PowerOff	
2002/08/30 22:58	MD	Play	xxxxxxxxabc
:	:	:	:
2002/08/31 20:56	TV	PowerOn	
2002/08/31 21:00	Video	Play	xxxxxxxxxx04
2002/08/31 21:00	Fan	PowerOn	
2002/08/31 21:55	TV	PowerOff	
2002/08/31 21:56	MD	Play	xxxxxxxxabc
:	:	:	:

FIG. 21

Episode	Operation sequence	Function sequence
2001	TV-PowerOn, TV-Play, AirConditioner-PowerOn	Watch, Watch, Cool
2002	TV-PowerOff, AirConditioner-PowerOff, MD-Play	Stop-Watch, Stop-Cool, Listen
2003	TV-PowerOn, Video-Play, Fan-PowerOn	Watch, Watch, Cool
2004	TV-PowerOff, MD-Play	Stop-Watch, Listen

FIG. 22

No.	Frequent operation pattern
1	TV-PowerOff, MD-Play

FIG. 23

No.	Frequent function pattern
1	Watch, Watch, Cool
2	Stop-Watch, Listen

FIG. 24

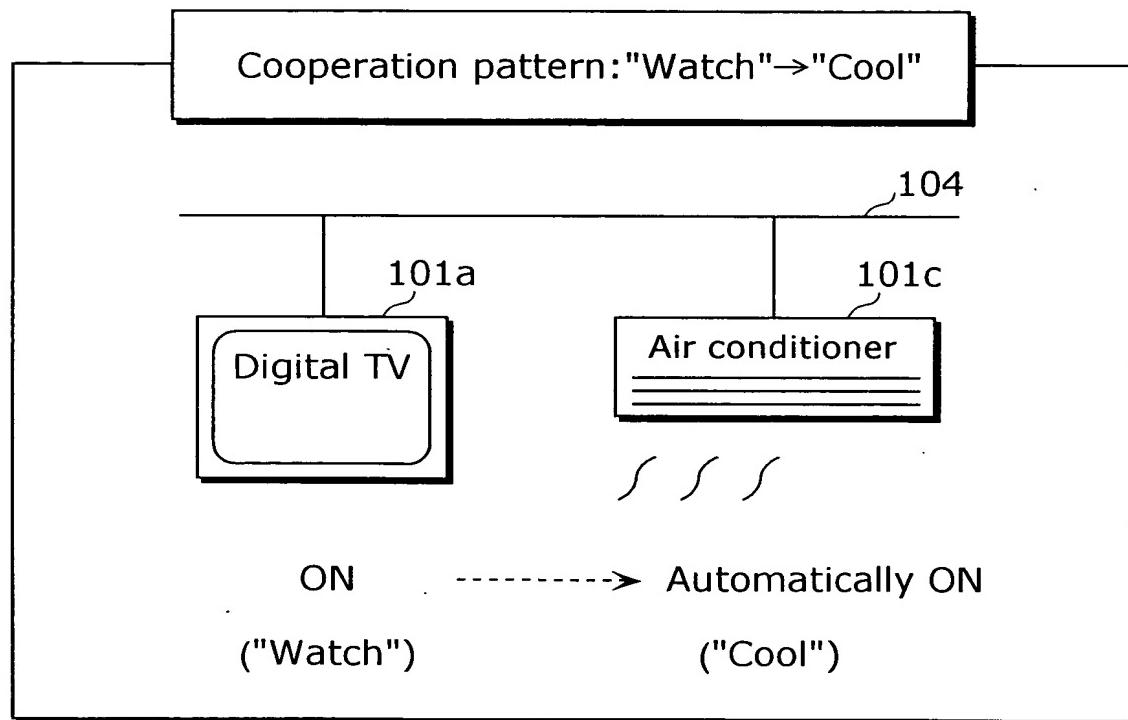


FIG. 25

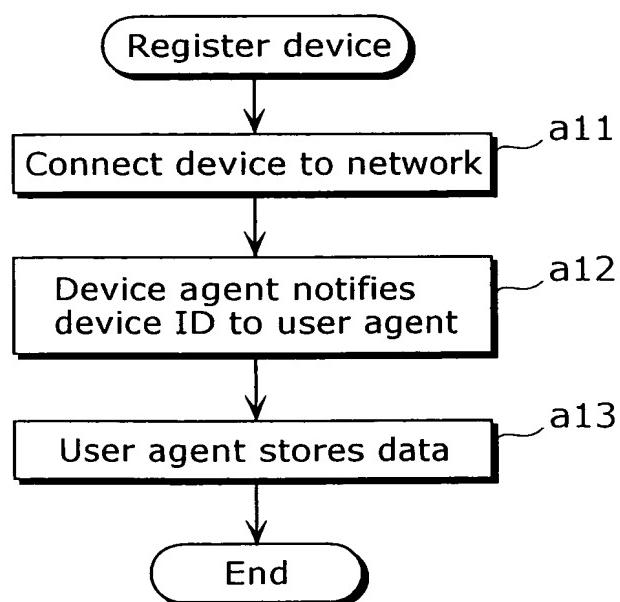


FIG. 26

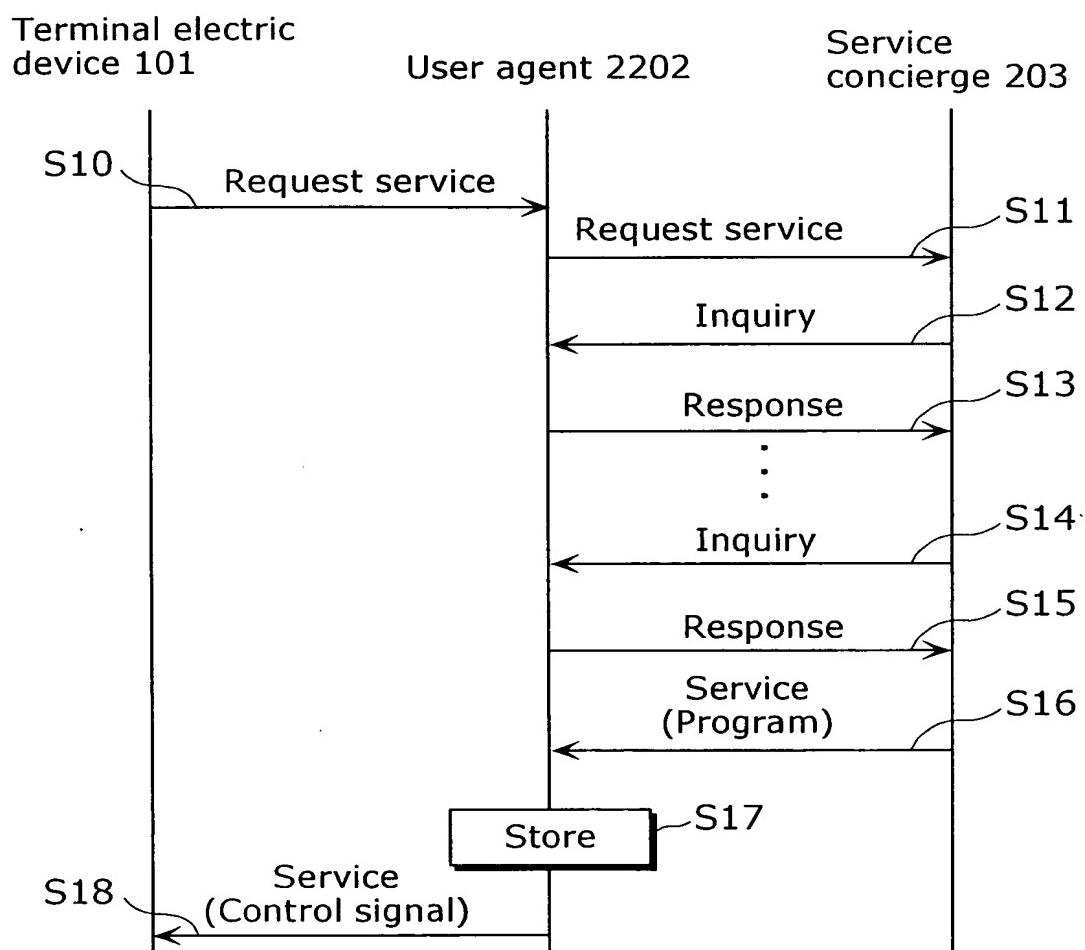


FIG. 27

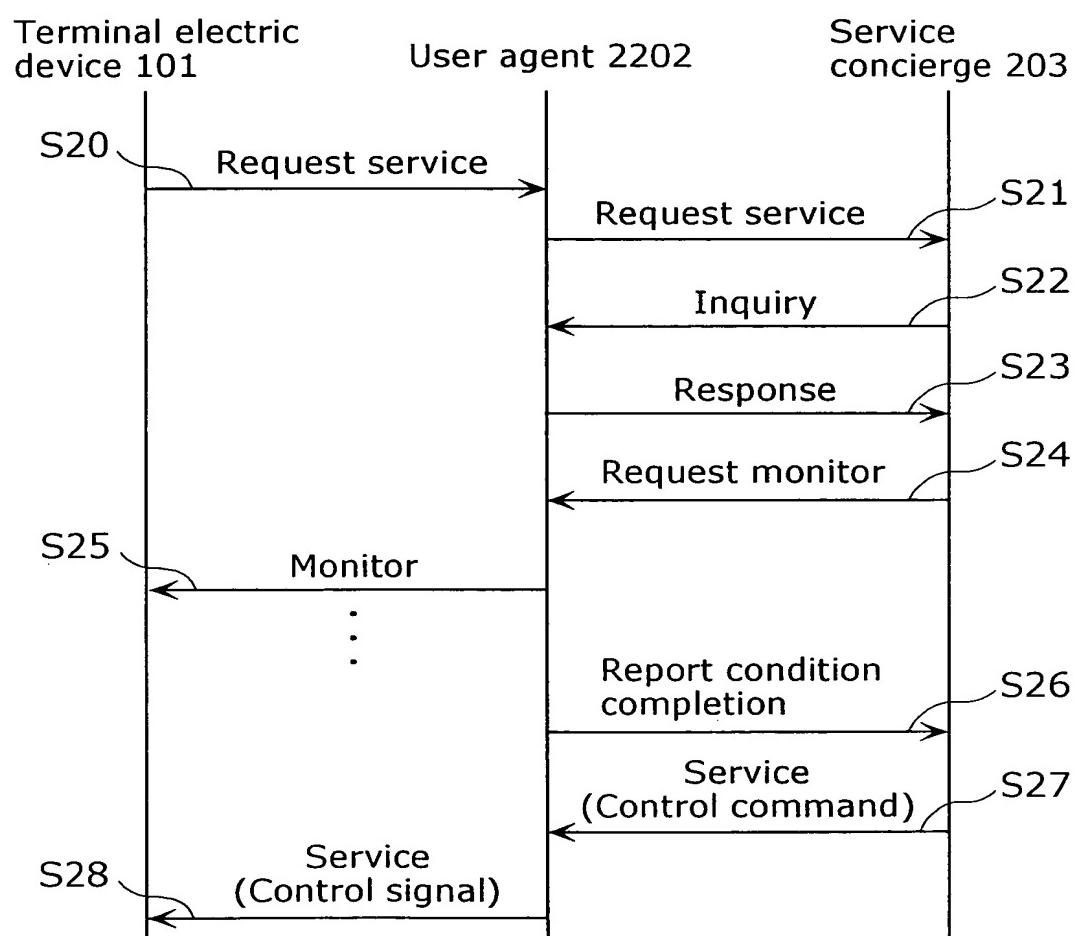


FIG. 28

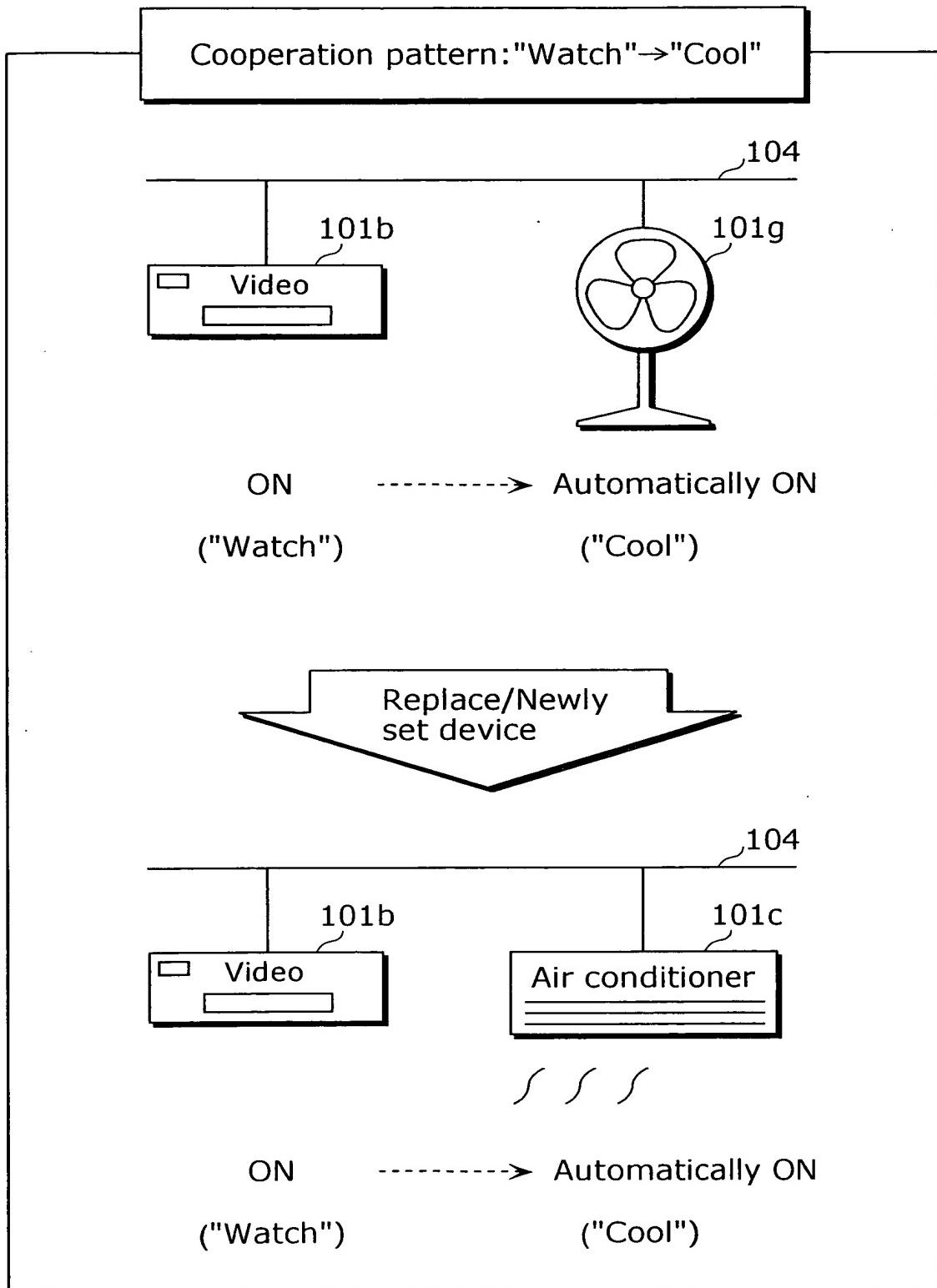


FIG. 29

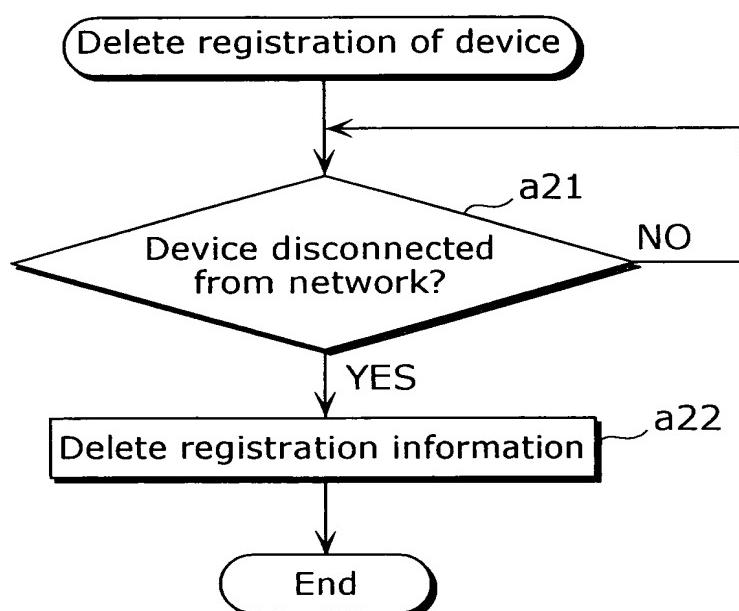


FIG. 30

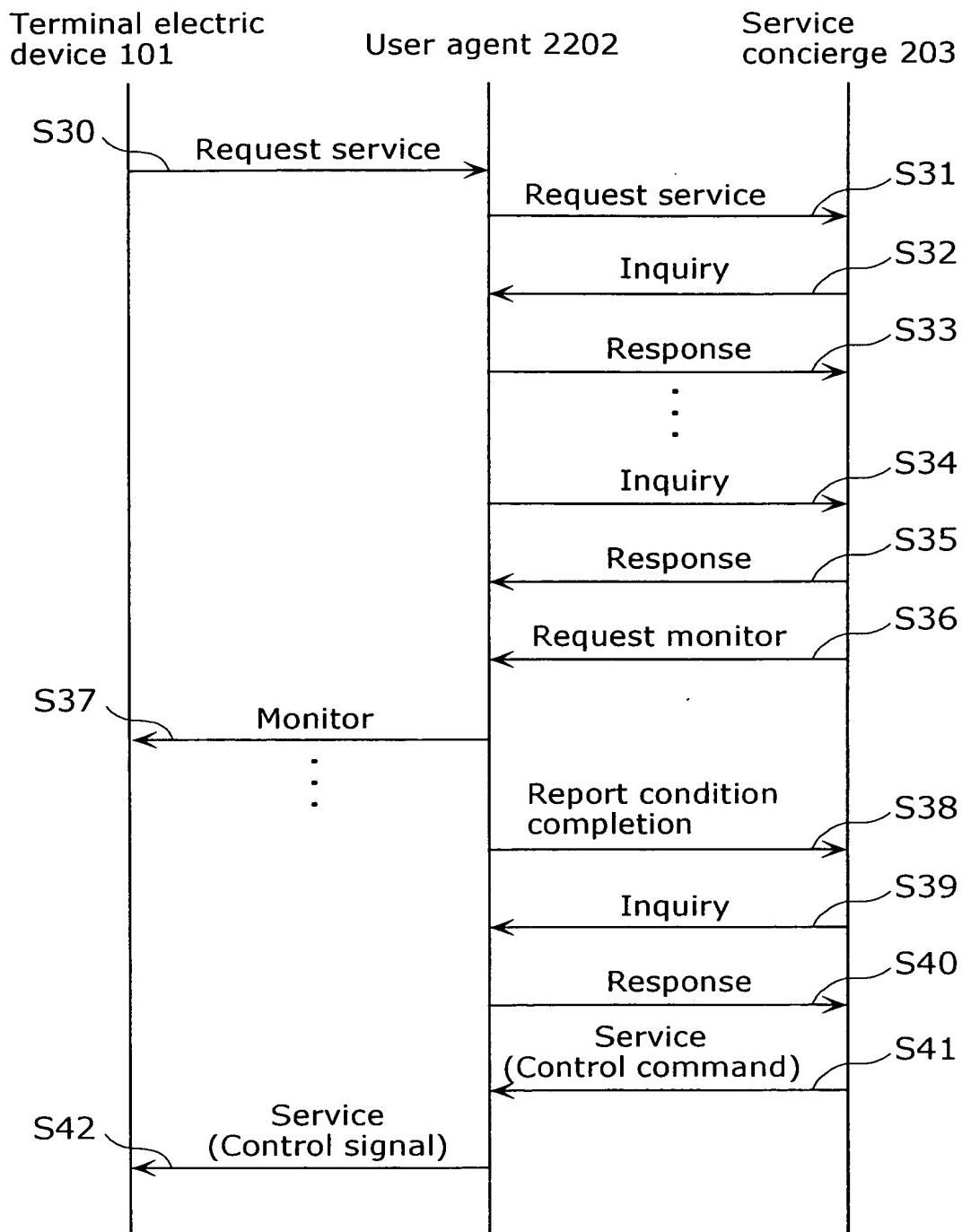


FIG. 31

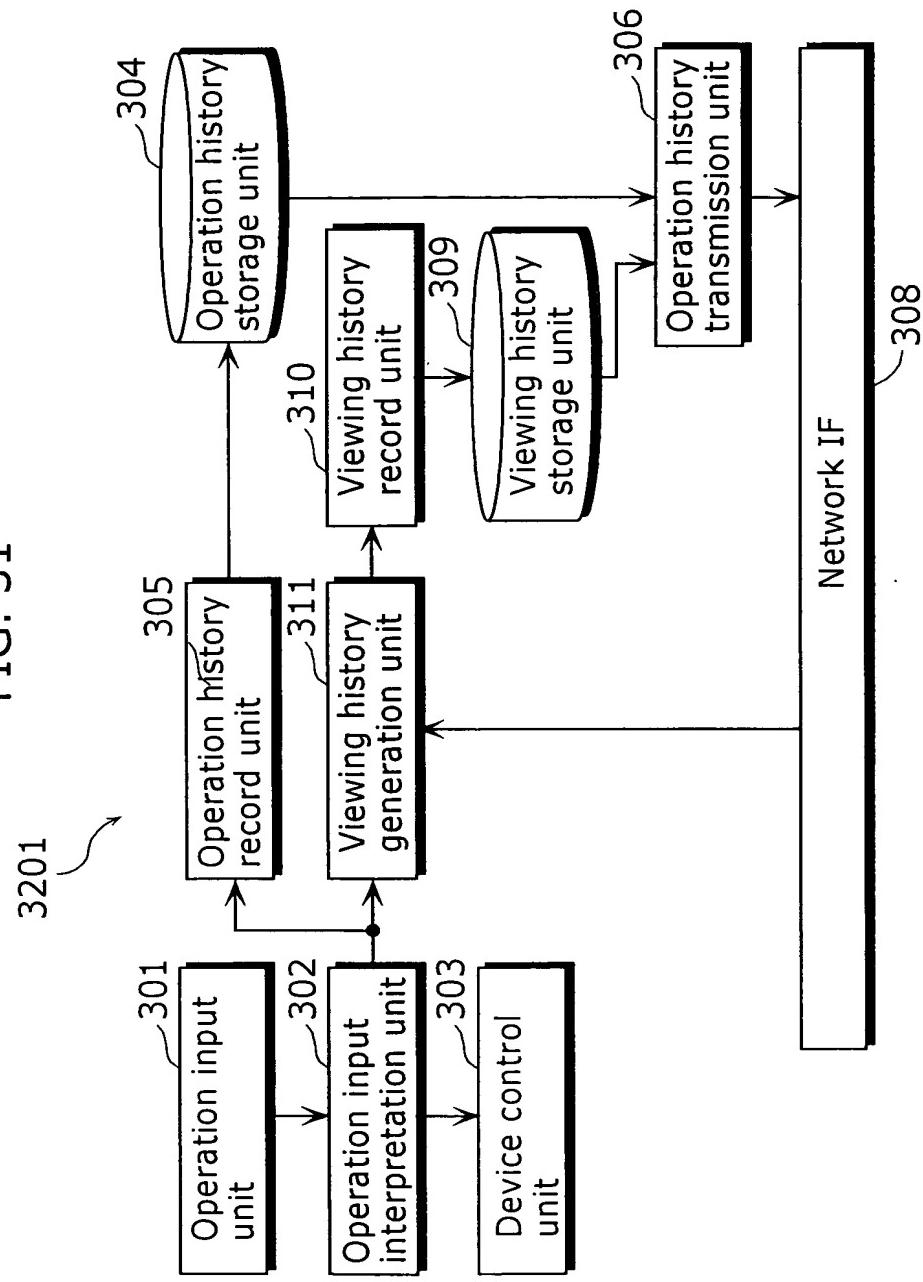
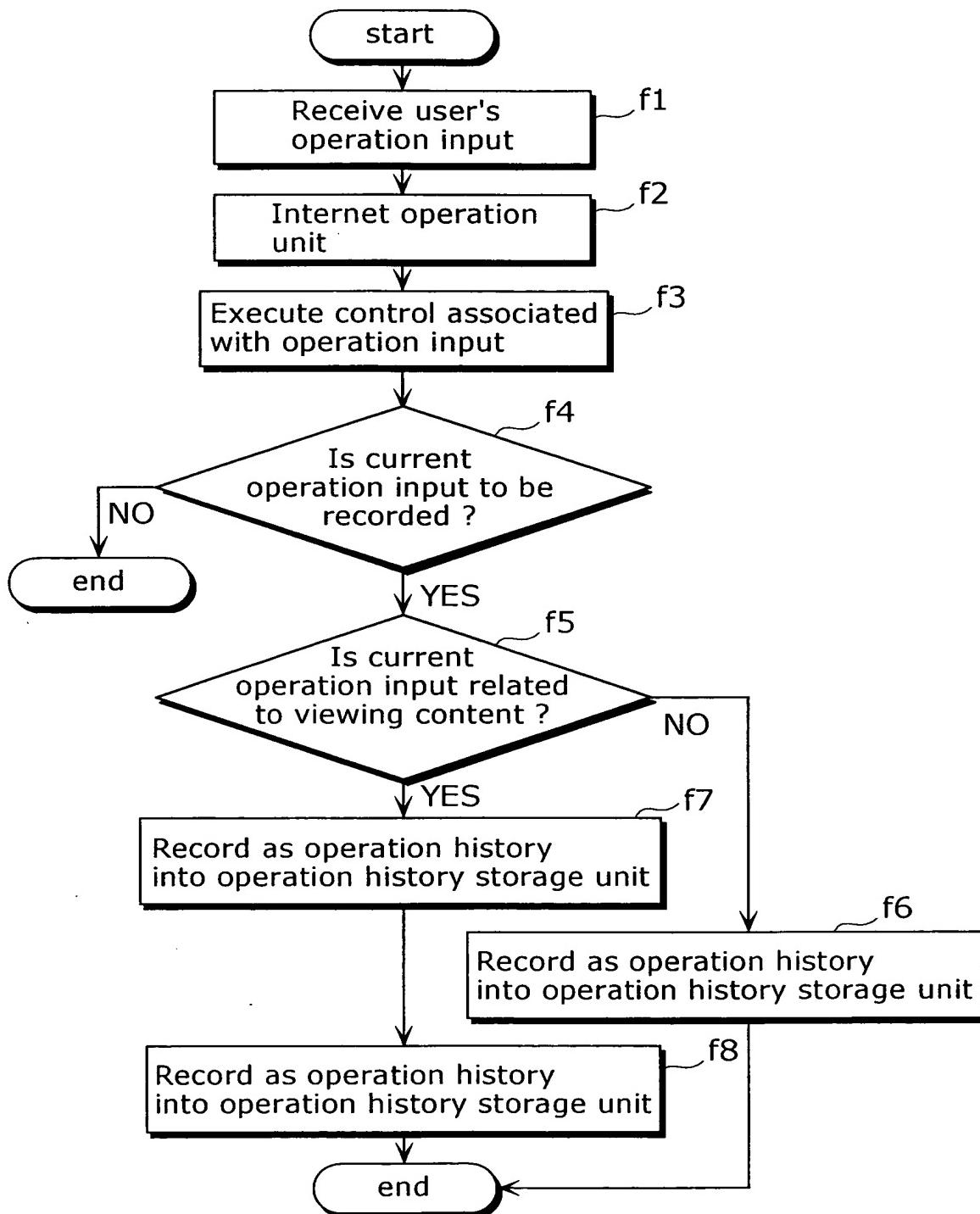
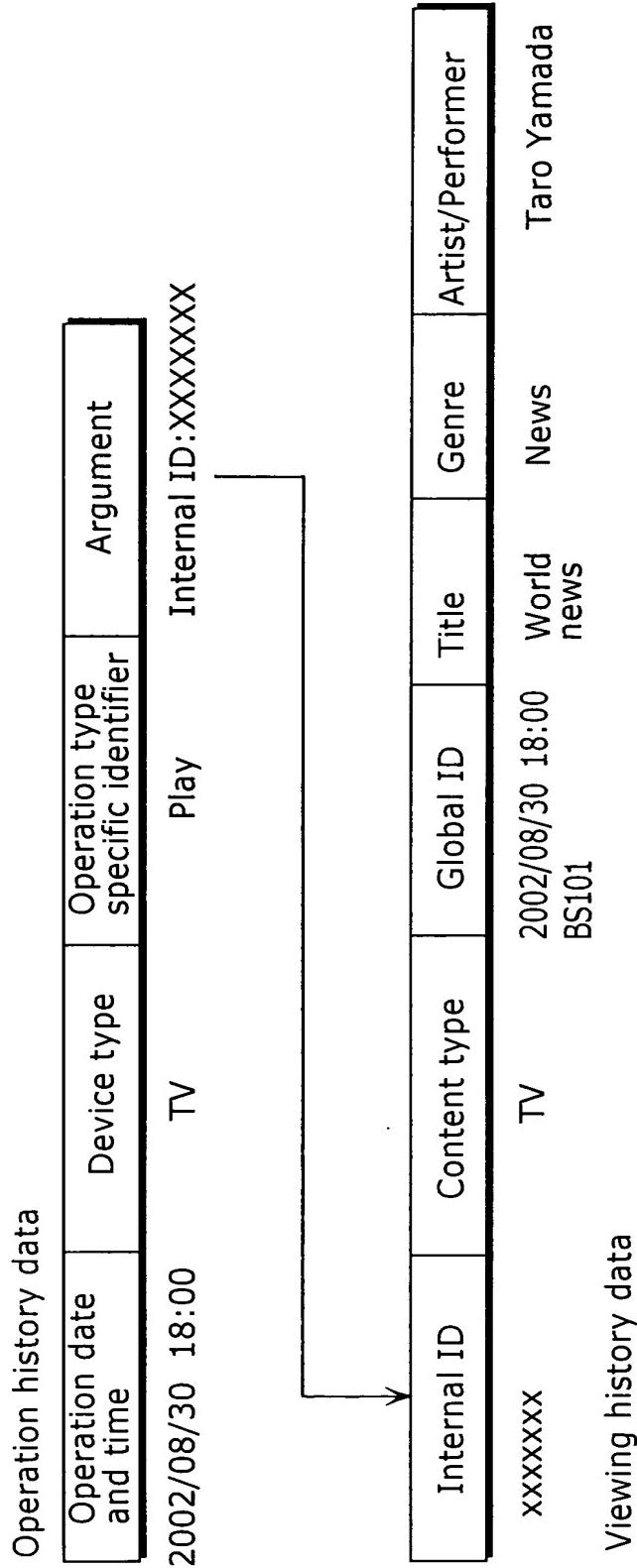


FIG. 32



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FIG. 33



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FIG. 34

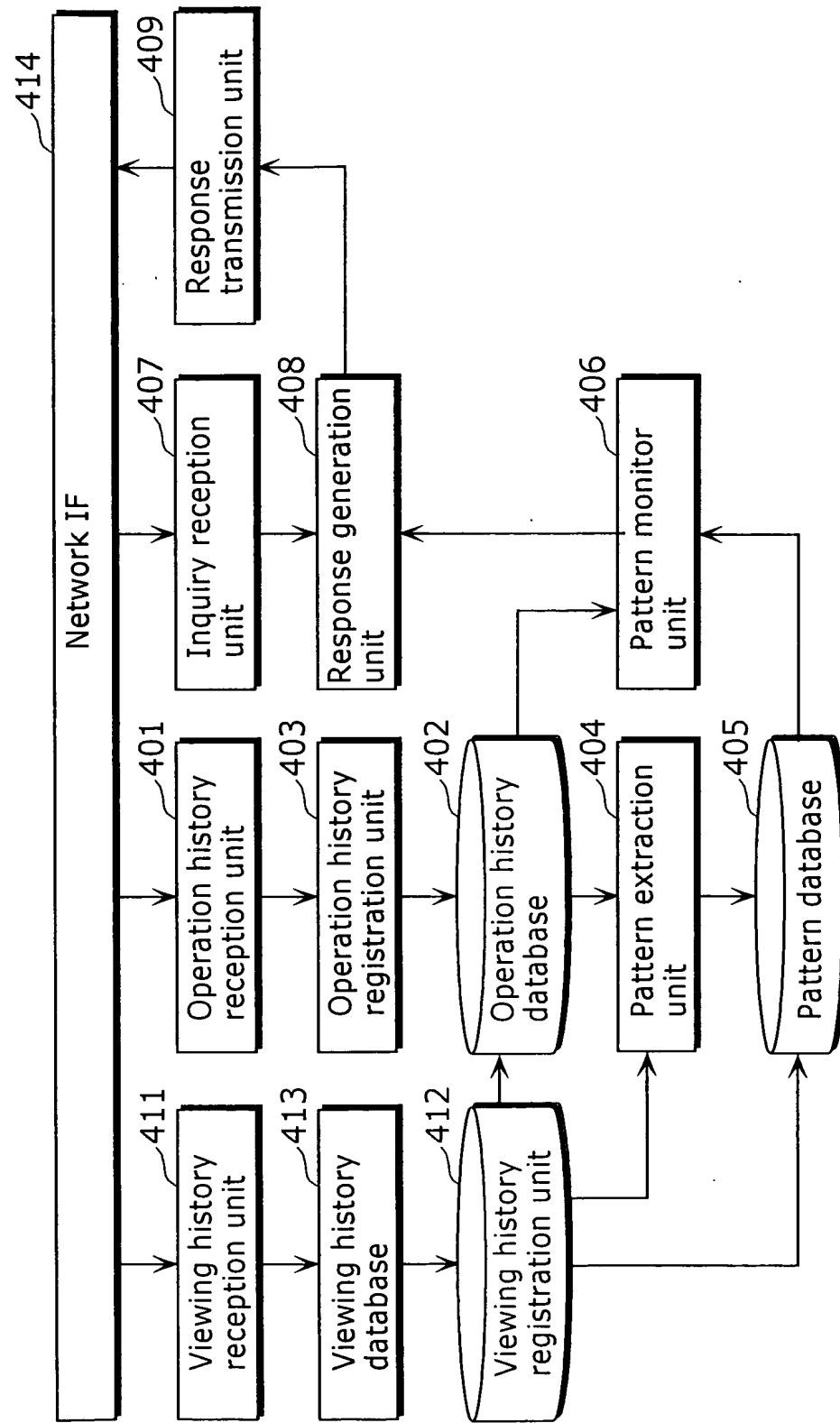


FIG. 35

Operation date and time	Device type	Operation type specific identifier	Argument
2002/08/30 21:00	TV	Play	xxxxxxxxx04
2002/08/30 21:01	AirConditioner	PowerOn	3001
2002/08/30 21:01	Light	PowerOn	
:	:	:	
2002/08/31 21:58	AirConditioner	PowerOn	
2002/08/31 21:58	Light	PowerOff	
2002/08/31 22:00	TV	Play	3002
:	:	:	
2002/09/02 19:55	TV	Play	
2002/09/02 19:55	Light	PowerOn	
2002/09/02 19:58	AirConditioner	PowerOn	
:	:	:	
2002/09/05 20:30	AirConditioner	PowerOn	3003
2002/09/05 20:31	TV	Play	
2002/09/05 20:33	Light	PowerOff	
:	:	:	

FIG. 36

Internal ID	Content type	Global ID	Title	Genre	Artist/Performer
xxxxxxxxx04	TV	2002/08/30 21:00	BS101	Season of sun	Drama Tatsuo Hujihara
xxxxxxxxx05	TV	2002/08/31 22:00	BS113	Romance 2000	Movie Bill Jobs
xxxxxxxxxcn	TV	2002/09/02 19:55	BS192	News 20	News Hiroshi kume
xxxxxxxxxb6	TV	2002/09/05 20:31	BS163	Happy day	Movie Steve Gates
:	:	:	:	:	:

FIG. 37

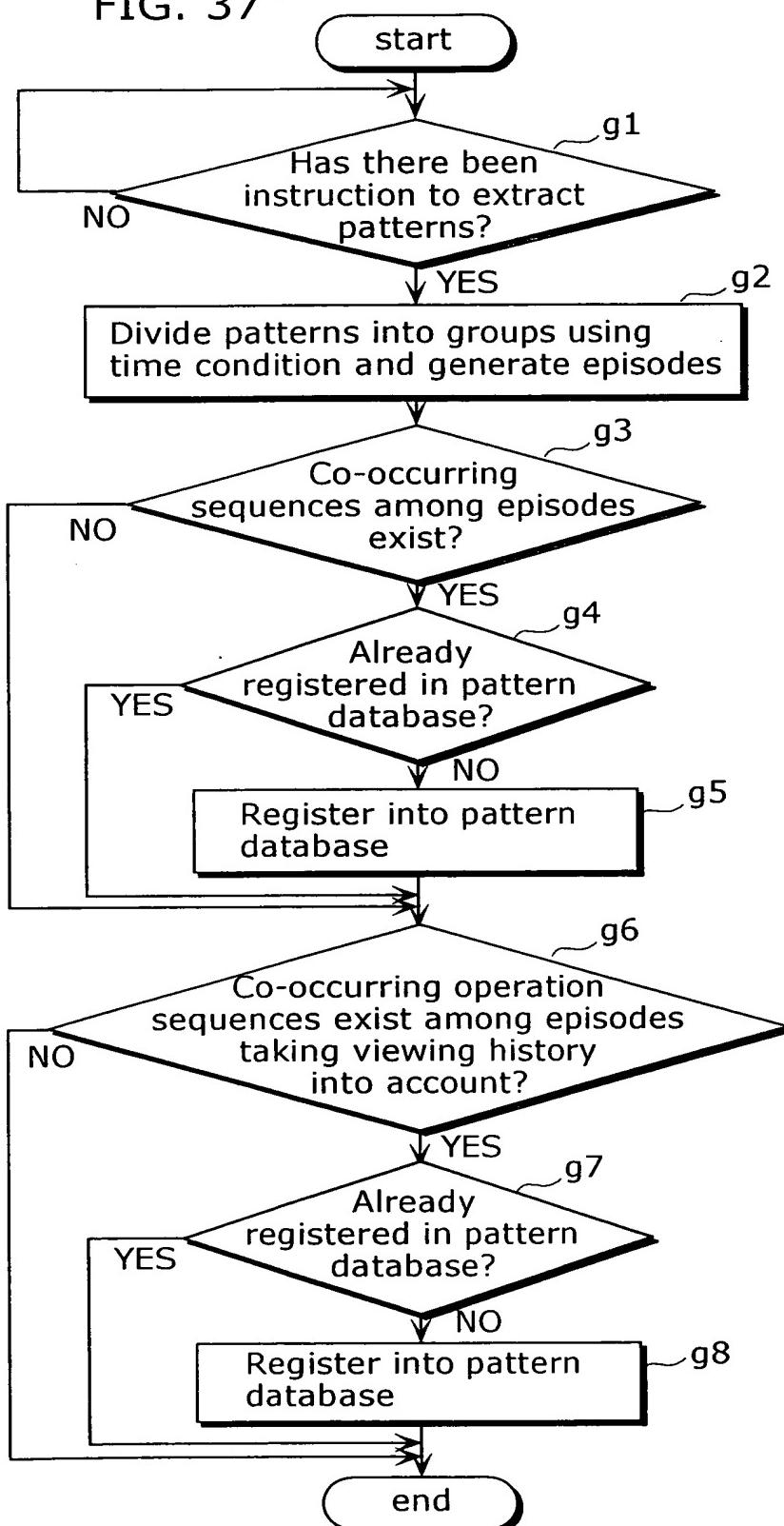


FIG. 38

Episode	Operation sequence
3001	TV-Play, AirConditioner-PowerOn, Light-PowerOn
3002	AirConditioner-PowerOn, Light-PowerOff, TV-Play
3003	TV-Play, Light-PowerOn, AirConditioner-PowerOn
3004	AirConditioner-PowerOn, TV-Play, Light-PowerOff

FIG. 39

No.	Frequent operation pattern
1	TV-Play, AirConditioner-PowerOn, Light-PowerOn
2	TV-Play, AirConditioner-PowerOn, Light-PowerOff
3	TV-Play, AirConditioner-PowerOn

FIG. 40

Episode	Operation sequence
3001	TV-Drama, AirConditioner-PowerOn, Light-PowerOn
3002	AirConditioner-PowerOn, Light-PowerOff, TV-Movie
3003	TV-News, Light-PowerOn, AirConditioner-PowerOn
3004	AirConditioner-PowerOn, TV-Movie, Light-PowerOff

FIG. 41

No.	Frequent operation pattern
1	AirConditioner-PowerOn, Light-PowerOn
2	TV-Movie, AirConditioner-PowerOn, Light-PowerOff

FIG. 42

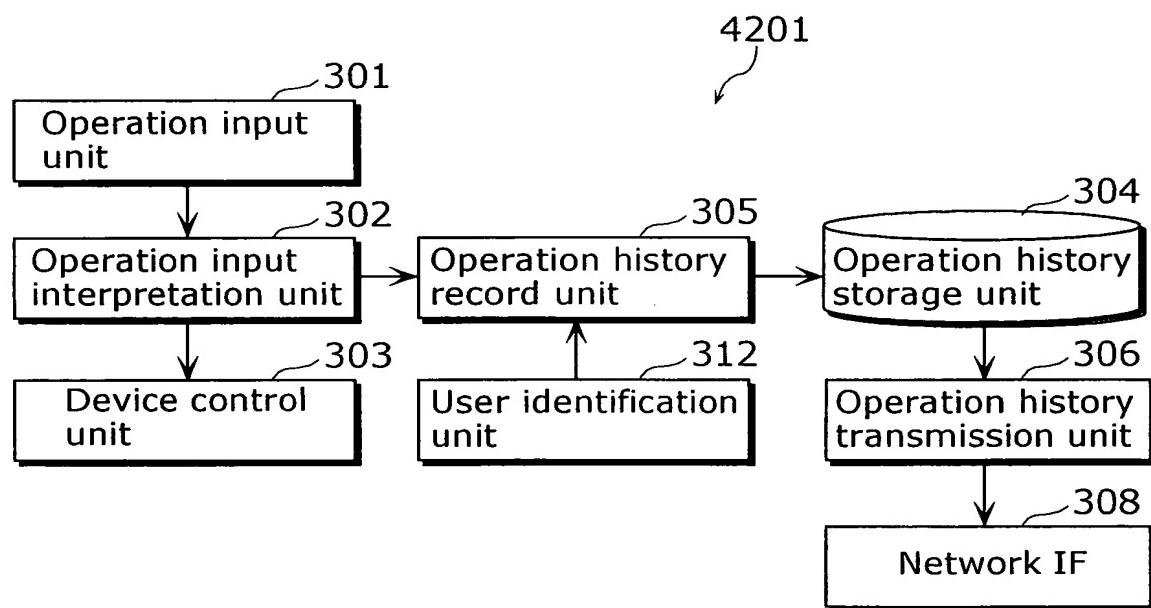


FIG. 43

Operation date and time	User ID	Device type	Operation type specific identifier	Argument
2002/08/29 11:00	abc123xxxxxx	Air Conditioner	Set	27

FIG. 44

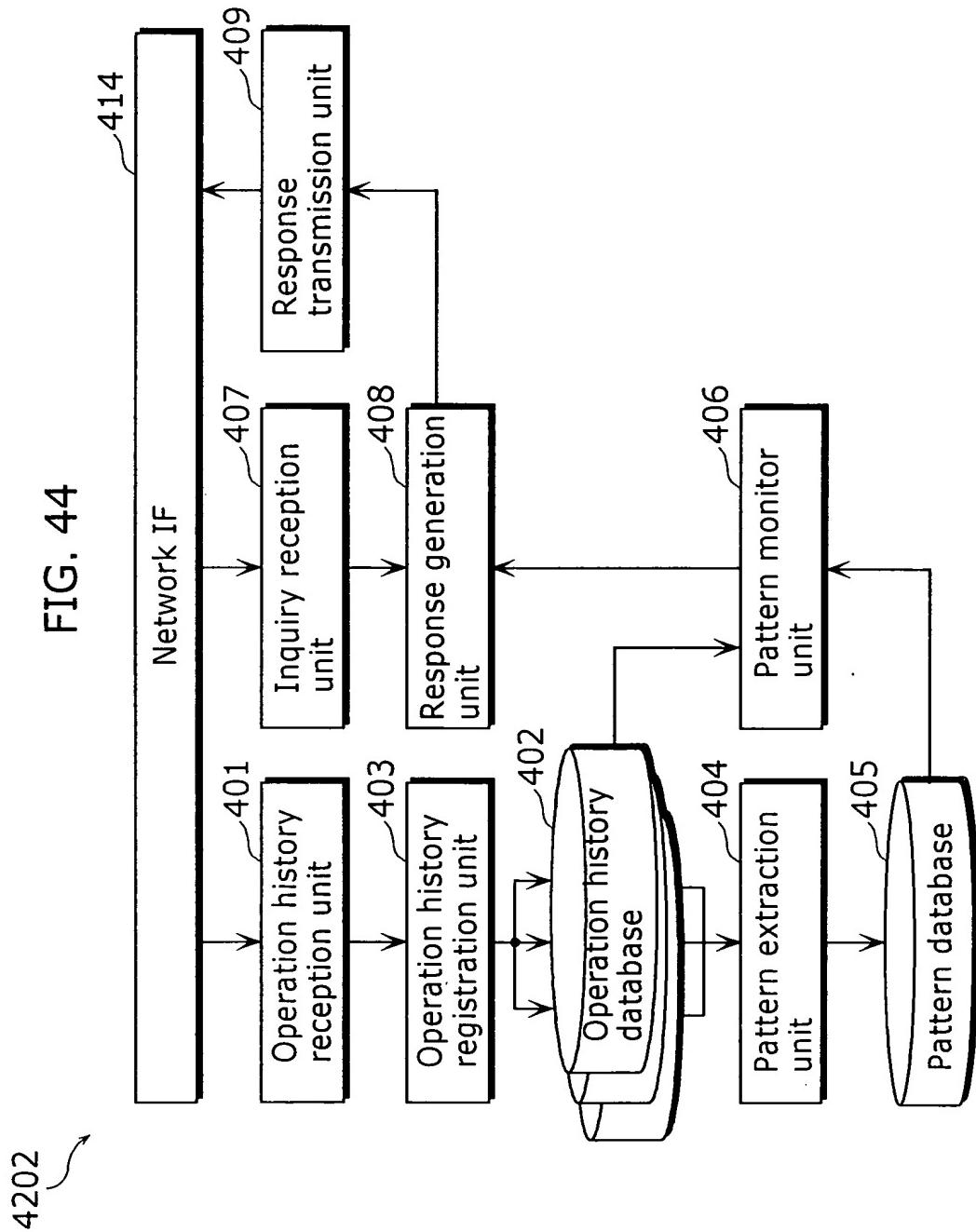


FIG. 45

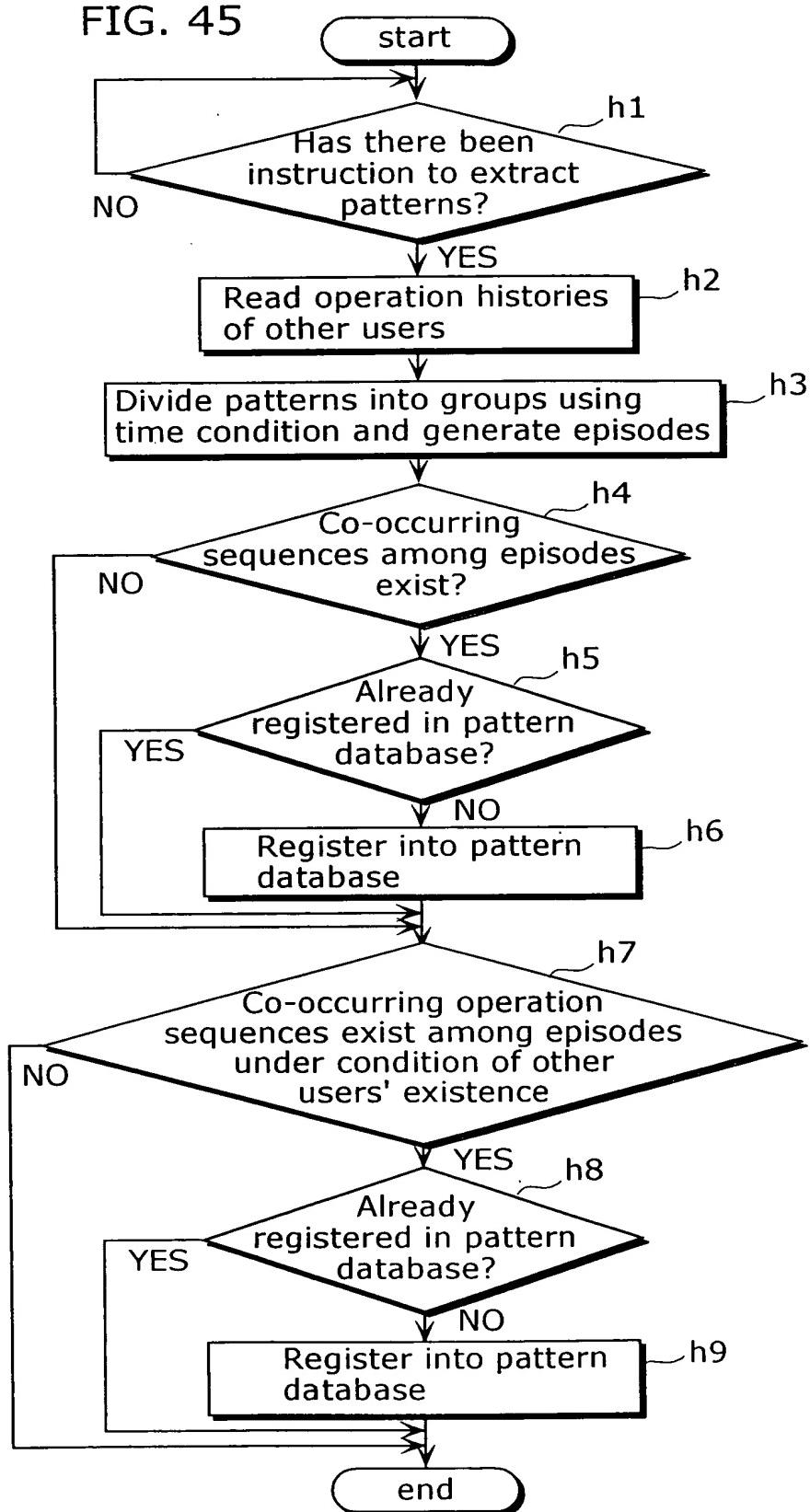


FIG. 46

Operation date and time	User ID	Device type	Operation type specific identifier	Argument
2002/08/30 21:00	abc123xxx	TV	PowerOn	xxxxxx04
2002/08/30 21:00	abc123xxx	TV	Play	
2002/08/30 21:01	abc123xxx	AirConditioner	PowerOn	
2002/08/30 21:03	def457yyy	Radio	PowerOff	
2002/08/30 21:03	abc123xxx	Light	PowerOn	4001
:	:	:	:	
2002/08/31 20:56	abc123xxx	TV	PowerOn	
2002/08/31 21:00	abc123xxx	AirConditioner	PowerOn	
:	:	:	:	4002
2002/09/01 19:00	abc123xxx	TV	PowerOn	
2002/09/01 19:00	abc123xxx	Light	PowerOn	
2002/09/01 19:01	abc123xxx	AirConditioner	PowerOn	
2002/09/01 19:01	def457yyy	MD	Stop	
:	:	:	:	4003
2002/09/03 21:58	abc123xxx	AirConditioner	PowerOn	
2002/09/03 22:00	abc123xxx	TV	PowerOn	
2002/09/03 22:00	abc123xxx	TV	Play	
:	:	:	:	4004

FIG. 47

Episode	Operation sequence	Other users who existed
4001	TV-PowerOn, TV-Play, AirConditioner-PowerOn, Light-PowerOn	def457yyy
4002	TV-PowerOn, AirConditioner-PowerOn	
4003	TV-PowerOn, Light-PowerOn, AirConditioner-PowerOn	def457yyy
4004	AirConditioner-PowerOn, TV-PowerOn, TV-Play	

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FIG. 48

No.	Frequent operation pattern
1	TV-PowerOn, AirConditioner-PowerOn, Light-PowerOn
2	TV-PowerOn, AirConditioner-PowerOn

FIG. 49

No.	Frequent operation pattern	Other users who existed
1	TV-PowerOn, AirConditioner-PowerOn, Light-PowerOn	def457yyy
2	TV-PowerOn, AirConditioner-PowerOn	

FIG. 50

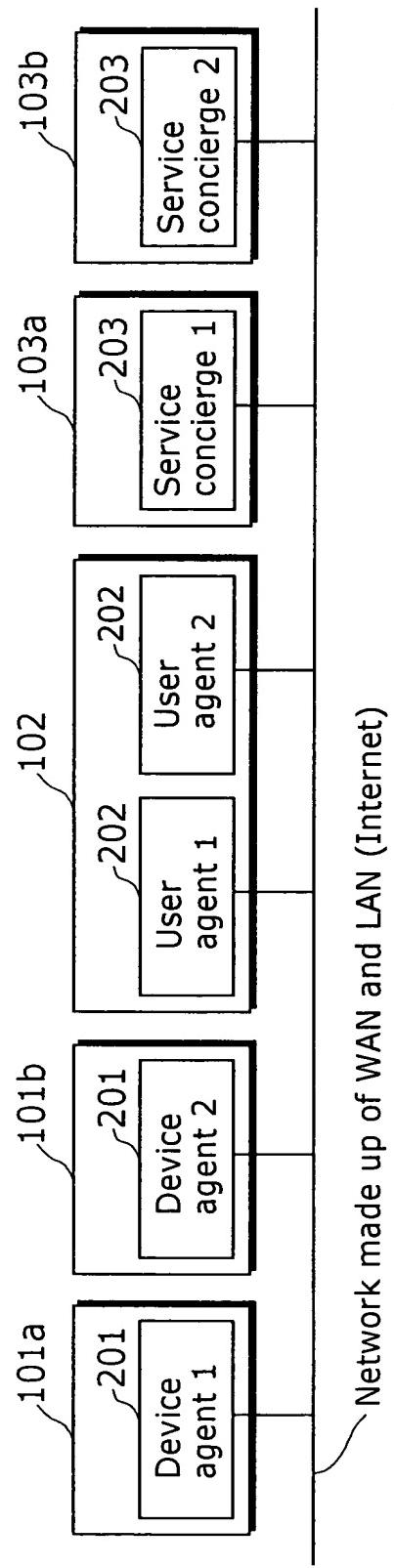


FIG. 51

Operation date and time	Device type	Operation type specific identifier	Argument
2002/09/28 13:32	Tel	Call	06-1111-2222
2002/09/28 13:35	CD	Play	ID:abc123456
:	:	:	:
2002/09/29 18:11	Tel	Call	03-1234-5678
2002/09/29 18:15	OvenRange	PowerOn	
:	:	:	:
2002/09/30 16:21	Tel	Call	03-1234-5678
2002/09/30 16:25	OvenRange	PowerOn	
:	:	:	:
2002/10/01 11:41	Tel	Call	06-1111-2222
2002/10/01 11:43	CD	Play	ID:def98765
:	:	:	:

**FIG. 52**

Episode	Operation sequence
	Tel-Call, CD-Play
	Tel-Call, OvenRange-PowerOn
	Tel-Call, OvenRange-PowerOn
	Tel-Call, CD-Play

**FIG. 53**

No.	Frequent operation pattern
1	Tel-Call ,CD-Play
2	Tel-Call, OvenRange-PowerOn

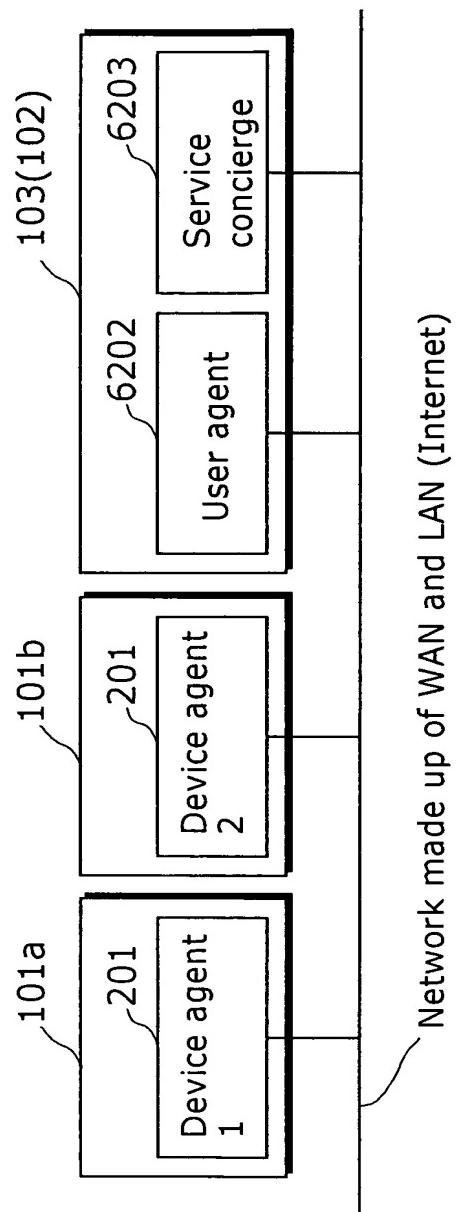
**FIG. 54**

Episode	Operation sequence
5001	Tel-Call-0611112222, CD-Play
5002	Tel-Call-0312345678, OvenRange-PowerOn
5003	Tel-Call-0312345678, OvenRange-PowerOn
5004	Tel-Call-0611112222, CD-Play

**FIG. 55**

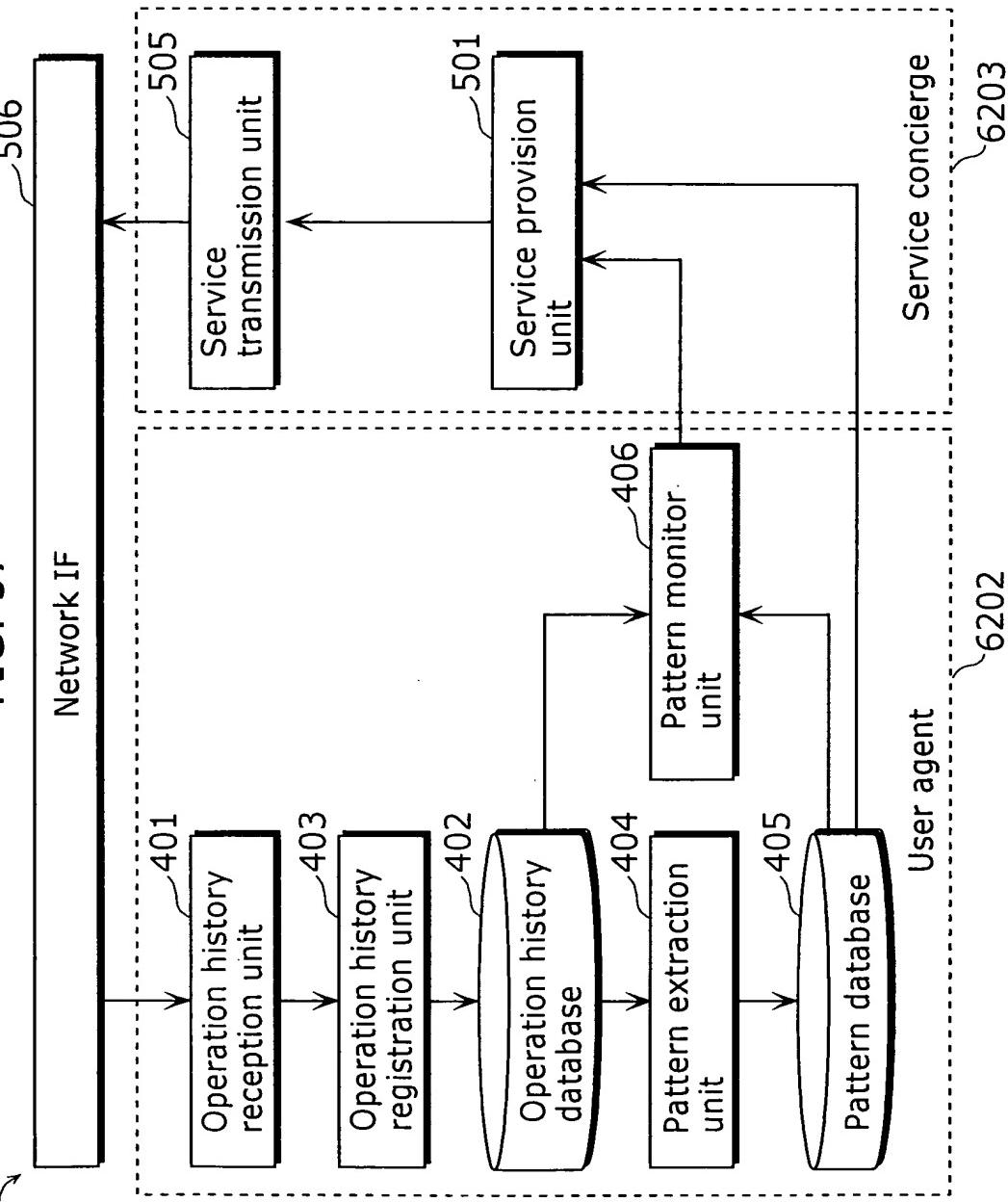
No.	Frequent operation pattern
1	Tel-Call-0611112222, CD-Play
2	Tel-Call-0312345678, OvenRange-PowerOn

FIG. 56

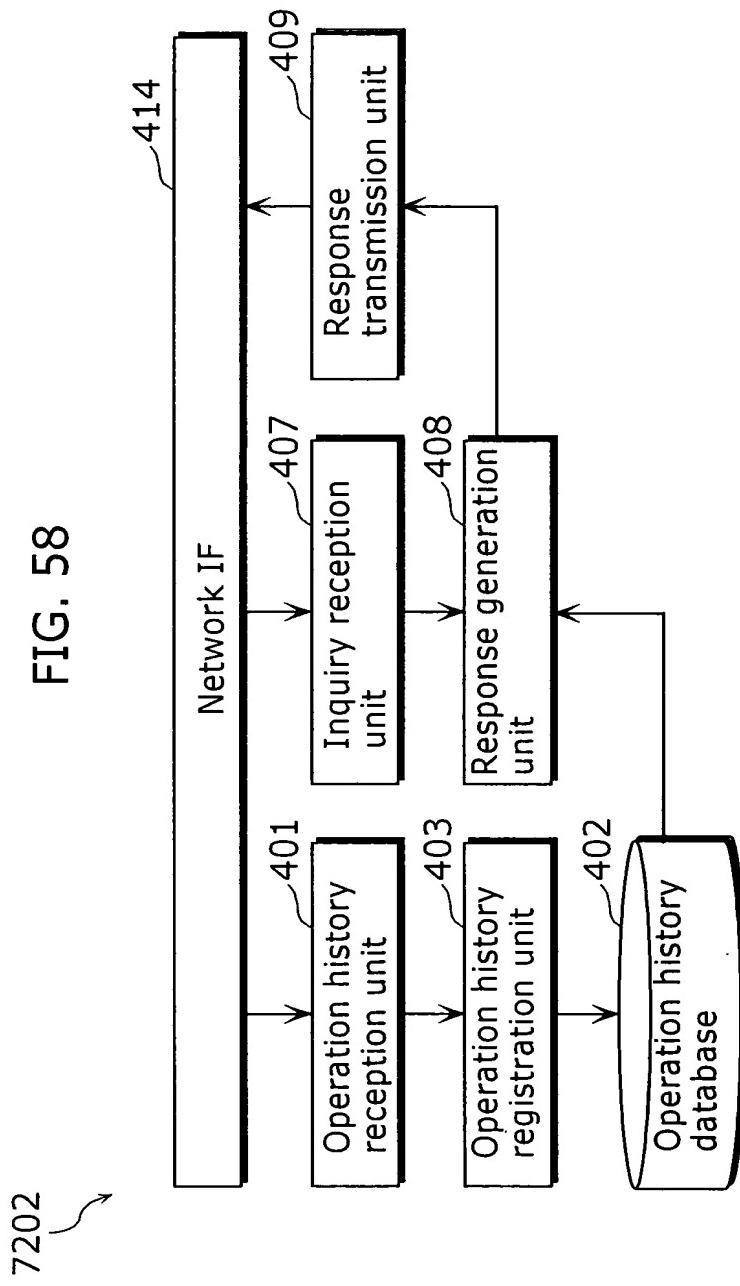


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FIG. 57



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FIG. 59

